

Notice of Allowability

Application No.

10/023,389

Examiner

Chih-Ching Chow

Applicant(s)

MONZ ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/18/2006.
2. ☒ The allowed claim(s) is/are 1-71.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>10/26/06</u> |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>12/14/01</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Examiner's Amendment and Statement of Reasons for Allowance

1. This action is responsive to Applicant's amendment filed on August 18, 2006.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Douglas M. McAllister, Registration Number 37,886, on October 26, 2006 for obviating any potential 101 issues and put the claims in condition for allowance.

The application has been amended as follows:

Claim 1, line 1: A computer-implemented method for generating a control program for a machine tool, said

Claim 36, line 1: A computer programming system for generating a control program to provide

-- End --

Examiner's Statement of Reason(s) for Allowance

3. Claims 1-71 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The prior arts of record: **Fujita**, teaches a numerical control apparatus having a work simulation function for enabling both the workpiece and the movement of the tool to be displayed at any time on the same display screen during the work simulation.

Schwenke, teaches a programming language for programming industrial controllers in relay ladder logic language, the programming language including both extensions to standard RLL rung form itself and extensions wholly independent of the standard form.

Frey, teaches a method for virtual machining which helps predict the accuracy of parts to be made on machine tools, allocates errors in design and manufacture of machine tools, and diagnoses the source of errors in machine tools. More particularly, the present invention relates to a method which calculates the "error shape" of a part being

manufactured based upon the position, orientation, velocity and shape of the machine

tool. **Kunil**, teaches a method for programming a robot or forming a numerical control program for a machine tool comprises analyzing the actual motions of a human being and designing a new motion based on knowledge obtained by analysis of the forces and torques acting on the joints of the human body. **Iriguchi**, teaches an automatic

programming apparatus comprises a machining unit preparing section for preparing plural machining units, a machining unit defining section for selecting a designated machining unit from the prepared machining units and designating the arrangement and

size of the machining area of the selected machining unit, and an machined material creating section for creating a shape with the machining area shape removed from the material shape. **Monz**, teaches methods and apparatus are provided for visualizing a

control program of a machine tool. The machine tool is provided with operating units.

The operating units may comprise machining units, which are provided with tools, and at least one workpiece receiving in accordance with a machine tool configuration. The

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computerized control for controlling movement of the operating units in accordance with a control configuration. Sets of control data are read from the control program with a data processing unit. New art made of record: US Patent No. 5,940,301 by Damman et al., teaches a method and a device for controlling a machine tool, in particular an EDM machine, wherein the control data necessary for machining one or more workpieces is fed from the control device to the machine tool. However, none of them, taken alone or in combination, teaches a machine display for presenting a visualization of a virtual workpiece and at least two virtual operating units to a user by a data processing unit, each of said virtual operating units corresponding to an operating unit of said machine tool, addressing at least one of said virtual operating units by the user to specify virtual action(s) for said at least one virtual operating unit via a data input unit and visualizing said at least two virtual operating units and said specified virtual action(s) of said at least one virtual operating unit on said machine display, to show relative movement between said at least two virtual operating units on said machine display, and converting the action(s) specified to said at least one virtual operating unit into sets of control data of the control program by the data processing unit taking into account a machine configuration and control configuration specified to said machine tool; in such a manner as recited in claims 1, and 36. Also see the Applicant's REMARKS dated August 18, 2006, pp. 14-15.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Ching Chow whose telephone number is 571-272-3693. The examiner can normally be reached on 7:00am - 3:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ~~Wei Zhen~~ can be reached on 571-272-3703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Ching Chow
Examiner
Art Unit 2191
October 27, 2006

CC



WEI ZHEN
SUPERVISORY PATENT EXAMINER